

Harold N. Moldenke

AEGIPHILA MAGNIFICA var. *PUBESCENS* Moldenke, var. nov.

Haec varietas a forma typica speciei recedit laminis foliorum subtus densissime breviterque pubescentibus supra dense puberulentis.

This variety differs from the typical form of the species in having the lower leaf-surfaces of even the most mature leaves very densely short-pubescent and the upper leaf-surfaces densely puberulent.

The type was collected by Alexander F. Skutch (no. 4139) in a clearing in the cloud forest, at an altitude of 1035 m., in the vicinity of El General, San José, Costa Rica, in 1939, and is no. 1644594 in the United States National Herbarium.

BOUCHEA CIPOËNSIS Moldenke, sp. nov.

Frutex; caulibus ramisque griseis plusminusve puberulis obtuse tetragonis, in statu senectute glabrescentibus; ramulis gracilibus acute vel obtuse tetragonis dense breviterque puberulis, pilis flavidulis; petiolis gracilibus abbreviatis dense breviterque pubescentibus, pilis cinereis divergentibus; laminis chartaceis ellipticis acutis serratis supra plusminusve adpresso-puberulis vel pilosulis, subtus densissime breviterque pubescentibus, pilis cinereis.

Shrub to about 1 m. tall; stems and branches medium-slender, gray, more or less puberulent, glabrescent in age, obtusely tetragonal; branchlets slender, grayish, acutely or obtusely tetragonal, densely short-puberulent with flavidulous hairs; nodes annulate; principal internodes 0.6--6 cm. long; leaves decussate-opposite; petioles slender, uniformly abbreviated, 3--5 mm. long, densely short-pubescent with spreading cinereous hairs; blades chartaceous, bright-green above, much lighter beneath, elliptic, 2.5--4 cm. long, 1.4--2.2 cm. wide, normally acute at the apex, rather coarsely serrate from below the middle to the apex with uniform apiculate-acute teeth, more or less appressed-puberulent or pilosulous above, very densely short-pubescent with cinereous hairs beneath; midrib slender, flat above, prominent beneath; secondaries very slender, 4 or 5 per side, flat or subprominulous above, often hidden by the dense pubescence beneath, arcuate-ascending; veinlet reticulation indiscernible on both surfaces; inflorescence terminal, to about 20 cm. long, rather loosely many-flowered, subspicate-racemiform; peduncles 2--3 cm. long, they and the rachis slender, very densely puberulent; pedicels to 2 mm. long, more obscure before anthesis, puberulent; bractlets lanceolate, about 4 mm. long, attenuate at the apex, puberulent on the back; calyx tubular, 9--11 mm. long, 5-costate, puberulent, its rim shortly 5-apiculate; corolla lilac, hypocrateriform, zygomorphic, its tube about 1.5 cm. long, its limb to 1 cm. wide.

The type of this species was collected by Geraldo Mendes Magalhães (no. 4318) in the capoeira at Fazenda do Cipó, município Jaboticatubas, Minas Gerais, Brazil, on October 22, 1943, and is deposited in the Britton Herbarium at the New York Botanical Garden. It is related to B. boliviana (Kuntze) Moldenke, but may be distinguished at once by its much smaller and shorter-petioled leaves.

CHASCANUM HUMBERTI Moldenke, sp. nov.

Suffrutex; ramis ramulisque gracillimis acute tetragonis griseis densissime cinereo- vel albedo-puberulis, pilis reflexis; foliis oppositis; petiolis gracillimis dense cinereo-puberulis; laminis chartaceis elongato-oblongis obtusis vel subacutis, ad basin longe attenuatis, utrinque sparsissime obscureque strigillosis glabrescentibus; inflorescentiis terminalibus spicatis laxe multifloris; corollis magnis pallide roseis.

Subshrub about 1 m. tall; branches and branchlets very slender, rather acutely tetragonal, light-gray, very densely cinereous- or albidous-puberulent with retrorse hairs, more or less striate-costate; nodes annulate; principal internodes 0.5--4.5 cm. long; leaves decussate-opposite, often with extremely abbreviated twigs in their axils; petioles very slender, 5--10 mm. long, canaliculate above, densely cinereous-puberulent; blades chartaceous in drying, probably more or less fleshy when fresh, elongate-oblong, 1--4 cm. long, 3--12 mm. wide, obtuse or subacute at the apex, long-attenuate at the base, very sparsely and obscurely strigillose, soon glabrescent on both surfaces; midrib slender, plane above, somewhat prominulous beneath and rather densely puberulent; secondaries and veinlet reticulation indiscernible on both surfaces; inflorescence terminal, spicate, 11--15 cm. long, rather loosely many-flowered; peduncles very slender, light-gray, 1.5--2.5 cm. long, very densely cinereous-puberulent; rachis similar to the peduncles in all respects but somewhat flexuous and less densely puberulent, not excavated; bractlets lanceolate, 4--5 mm. long, long-attenuate at the apex, lightly and minutely puberulent or glabrescent; calyx tubular, 11--12 mm. long, about 1 mm. wide, minutely puberulent or glabrescent, 5-ribbed, its rim very shortly 5-toothed, the teeth apiculate; corolla hypocrateriform, pale-rose, showy, long-exserted, its tube narrow-cylindric, about 3 cm. long, subglabrous on the outer surface or more or less scattered-pilose near the apex and short-pubescent at the mouth, its limb wide-spreading, deeply 5-parted, the lobes obovate, about 7 mm. long and 5--7 mm. wide, rounded or sinuate at the apex; stamens 4, didynamous, inserted near the apex of the corolla-tube, included; filaments extremely short; pistil included; fruit not seen.

The type of this handsome species was collected by my good friend and respected colleague, Dr. Henri Humbert (no. 11548) -- in whose honor it is named -- in forests and bush on limestone soil at an altitude of 50--200 m., Basse Vallée du Fiherenana, Madagascar, in November 1933 and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris.

CHASCANUM INSULARE var. **CANESCENS** Moldenke, var. nov.

Hæc varietas a forma typica speciei ubique densissime canescentibus recedit.

This variety differs from the typical form of the species in being very densely canescent on the branches, stems, twigs, petioles, rachis, bractlets, calyxes, and leaves.

The type was collected by Henri Humbert (no. 19952) on calcareous rocky ground in xerophilous bush in the neighborhood of Tulear, near the hill of La Table, at an altitude of 150 m., Madagascar, on January 21, 1947, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris.

CHASCANUM INSULARE var. **HUMBERTI** Moldenke, var. nov.

Hæc varietas a forma typica speciei foliis maturis sæpe plusminusve irregulariter dentatis recedit.

This variety differs from the typical form of the species in having many of its larger mature leaves more or less irregularly dentate toward the apex.

The type of the variety was collected by Henri Humbert (no. 13290) on gneiss rock at Mont Morahariva (Mahamena), in the valley of the Manambolo, on the right bank (basin of Mandrare) in the vicinity of Isomono, at an altitude of 1000--1400 m., in December 1933, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris.

CHASCANUM INSULARE var. **TRIANGULARE** Moldenke, var. nov.

Hæc varietas a forma typica speciei recedit bracteolis triangularibus 1.5--2 mm. longis, ad apicem acutis vel obscure subacuminatis.

This variety differs from the typical form of the species in having the bractlets triangular in shape, 1.5--2 mm. long, acute or only very slightly subacuminate at the apex.

The type of this variety was collected by Henri Humbert and C. F. Swingle (no. 5493) on a calcareous plateau toward the east of the delta in the basin of Linta, at an altitude of 200--250 m., Madagascar, on August 29, 1928, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris.

CIERODENDRUM CAPITATUM var. **RIODESIENSE** Moldenke, var. nov.

Hæc varietas a forma typica speciei recedit caulibus petiolisque densiuscule hirsutulo-pubescentibus (pilis late divergentibus brunneis), laminis foliorum supra regulariter pilosis (pilis translucens multilocularibus) subtus densissime breviterque pubescentibus.

This variety differs from the typical form of the species in having the stems and petioles rather densely hirsutulous-pubescent with wide-spreading brownish hairs, the upper leaf-surface regularly pilose with translucent multicellular hairs, and the lower leaf-surface very densely short-pubescent, especially on the venation. The leaf-blades are membranous, ovate, 14--22 cm. long and 7--14 cm. wide, abruptly short-acuminate at the apex, varying from sinuate-entire to coarsely and irregularly apiculate-dentate from the widest part to the apex with up to about

9 teeth per side. The petioles are 1.6--16 cm. long.

The type of this variety was collected by my good friend and colleague, E. Milne-Redhead (no. 4303), in the Mwinilunga district of Northern Rhodesia just south of Matonchi Farm in *Brachystegia* woodland on January 24, 1938, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

CLERODENDRUM MILNE-REDHEADI Moldenke, sp. nov.

Herba perennis erecta vel frutex; caulibus obtuse tetragonis saepe rubescentibus densiuscule puberulis vel breviter pubescentibus; foliis oppositis vel ternatis, vel approximatis; petiolis brevissimis vel obsoletis puberulis; laminis submembranaceis oblanceolatis acutis vel breviter acuminatis, ad basin cuneatis vel longe attenuatis, subintegris vel crasse 3--6-dentatis, supra minute irregulariterque strigillosis, subtus densiuscule punctatis puberulisque; inflorescentiis terminalibus paniculatis; cymis paucifloris; floribus magnis.

Erect perennial herb or much-branched shrub to 1 m. tall; stems pale-green or reddish-tinged, obtusely tetragonal, often slightly sulcate above, rather densely puberulent or short-pubescent throughout, less so in age; nodes not annulate; principal internodes 1.5--9 cm. long; leaves decussate-opposite or ternate, sometimes approximate, ascending; petioles very short, 1--2 mm. long, or obsolete, puberulent; blades submembranous, rather uniformly green on both surfaces or slightly lighter beneath, oblanceolate, 5.5--16 cm. long, 1.5--4.5 cm. wide, acute or short-acuminate at the apex, cuneate or long-attenuate to the base, subentire or coarsely dentate with 3--6 antrorse teeth above the widest part, minutely and irregularly strigillose above, rather densely punctate and puberulent beneath; midrib slender, plane above, prominent beneath; secondaries filiform, 3--6 per side, plane above, subprominulous beneath, ascending and slightly arcuate, not anastomosing at the margins and not entering the marginal teeth; veinlet reticulation sparse, obscure or indiscernible above, obscure beneath; inflorescence a terminal panicle 9--23 cm. long, to about 10 cm. wide, the lowermost pair of cymes usually in the axils of the uppermost leaves; cymes few-flowered, on slender puberulent stalks to about 4 cm. long, usually once or twice dichotomously branched with a central terminal flower in each dichotomy; bracts usually only one pair, subtending the second pair of cymes, foliaceous, sessile, to 3 cm. long and 8 mm. wide, puberulent on both surfaces; bractlets numerous, linear, 1--4 mm. long, puberulent, occasionally somewhat ampliate and purplish; flowers large, irregular; calyx pale-green, cupuliform, 4--7 mm. long, about 5 mm. wide, puberulent, the lobes red, often irregular, rounded; corolla irregular, green when young, the larger lip violet or purple, the other lobes mauve or greenish-mauve, 1.5--2 cm. long, subglabrae; stamens and style arching forward, entirely green when young, later whitish-mauve at base; anthers yellow, turning orange-brown; stigmas mauve or purple; fruiting-calyx incrassate, more or less patelliform, about 1 cm. wide, deeply 4-lobed with rounded lobes, puberulent on the out-

side; fruit deeply 4-lobed.

The type of this distinct species was collected by E. Milne-Redhead (no. 3526) -- in whose honor it is named -- in Brachystegia woodland just east of R. Matonchi in the Mwinilunga district, Northern Rhodesia, on December 6, 1937, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

COELOCARPUM GLANDULOSUM Moldenke, sp. nov.

Suffrutex; caulibus ramisque gracilibus griseis vel albidis obtuse tetragonis densiuscule albedo-strigosis (pilis arcte adpressis antrorsis); ramulis immaturis brunnescentibus subsulcatis; foliis oppositis; petiolis gracilibus densiuscule albedo-strigosis; laminis submembranceis vel tenuiter chartaceis saepe subfalcatis oblongis vel oblongo-ellipticis vel sublanceolatis vel suboblanceolatis saepe conduplicatis acutis vel obtusis, ad basin acutis vel cuneatis, regulariter dentatis, supra leviter strigillosis, subtus dense strigosis et resinoso-granulosis.

Subshrub 4--6 dm. tall; stems and branches slender, light-gray or whitish, obtusely tetragonal, all except the oldest ones rather densely white-strigose with short closely appressed antrorse hairs, the very youngest branchlets brunnescent and somewhat sulcate in drying; nodes very obscurely annulate; principal internodes 0.6--5 cm. long; leaves decussate-opposite, often with a cluster of very small ones on greatly abbreviated twigs in their axils; petioles slender, 2--10 mm. long, rather densely white-strigose like the branches; blades submembranous or thin-chartaceous, often slightly falcate, bright-green above, lighter beneath, varying from oblong or oblong-elliptic to obscurely sublanceolate or suboblanceolate, 1--3.5 cm. long, 4--1.4 cm. wide, often conduplicate, acute or obtuse at the apex, acute or cuneate at the base, regularly dentate along the margins except toward the base with acute or obtuse somewhat antrorse triangular teeth, lightly strigillose with whitish antrorse hairs on the upper surface, much more densely strigose and somewhat scattered resinous-granular beneath; midrib slender, flat or slightly impressed above, prominent beneath; secondaries slender, about 5 per side, ascending, hardly arcuate, not entering the marginal teeth, mostly obscure above, prominent beneath on larger leaves; veinlet reticulation obscure; inflorescence terminal, racemiform, 2.5--17 cm. long, subspicate, rather loosely many-flowered during and after anthesis, very dense before anthesis, densely spreading-pubescent and glandulose throughout; peduncles very slender, 1--2 cm. long, strigose-pubescent and glandulose; rachis with the hairs usually more spreading; pedicels filiform, 1--2 mm. long, spreading-pubescent and glandulose; bractlets narrow-elliptic, 1.5--2 mm. long, acute or subacuminate at both ends, spreading-pubescent and glandulose, rather divaricate, often falcate; calyx obovate, about 3.5 mm. long and 2.5 mm. wide, densely spreading-pubescent with gland-tipped hairs, 5-costate, its rim 5-toothed with very narrow and blunt callous-thickened apiculations about 0.5 mm. long and also glandular-pubescent; corolla white, usually tinged with rose or violet, infundibular, its

tube cylindric, about 4 mm. long, straight, its limb oblique, 2-lipped, the larger lip 3-lobed, the smaller 2-lobed, the largest lobe ovate, about 1.9 mm. long and 2 mm. wide, rounded and slightly erose on the margins, the remaining lobes similar but more rotund and only 1--1.3 mm. long and 0.8--1 mm. wide, glabrate or pulverulent; stamens 4, didynamous, inserted about 1.5 and 2 mm. above the base of the corolla-tube, included; filaments filiform, about 1 mm. long, glabrous, often genuiflexuous at the apex; anthers ovate-oblong, often held on a horizontal plane, about 0.8 mm. long and 0.3--0.5 mm. wide; pistil included; style capillary, 1--1.5 mm. long, glabrous; stigma peltate, about 0.5 mm. long, vertical; ovary subglobose, about 0.6 mm. long and wide, glabrous; fruiting-calyx hardly enlarged, somewhat urceolate, spreading-pubescent and glandulose; fruit splitting very readily into 2 similar hemispheric cocci, each about 2 mm. long and 1.3 mm. wide, shiny, brownish, smooth and almost flat on the commissural face, very convex and reticulate-ridged on the outer face.

The type of this distinct species was collected by Raymond Decary (no. 2733) on dunes at Ambovombe, Madagascar, on May 9, 1924, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris.

COELOCARPUM HUMBERTI Moldenke, sp. nov.

Suffrutex; ramis ramulisque gracilibus, in statu senectute albidis, in statu juventute brunnescentibus, argute tetragonis, saepe sulcatis densiuscule divaricato-pubescentibus, pilis brunneo-griseis; foliis oppositis; petiolis filiformibus dense pubescentibus, pilis brevibus saepe glanduliferis; laminis membranaceis brunnescentibus ovatis acutis vel obtusis, ad basin acutis vel acuminatis, irregulariter serratis utrinque densiuscule pubescentibus, subtus sparse resinoso-granulosis.

Subshrub 5--6 dm. tall; branches and branchlets slender, the oldest whitish or pale-gray, the younger ones brunnescent in drying, rather sharply tetragonal, the younger ones often sulcate in drying, rather densely spreading-pubescent with brownish-gray hairs of irregular length standing at right angles to the branch; nodes rather obscurely annulate; principal internodes 0.5--10.5 cm. long, usually rather abbreviated, rarely elongate; leaves decussate-opposite; petioles very slender or filiform, 0.4--3 cm. long, densely spreading-pubescent with short often gland-tipped hairs standing at right angles to the petiole; blades membranous or submembranous, rather dark-green and brunnescent on both surfaces in drying or somewhat lighter beneath, ovate, 1--6.5 cm. long, 0.5--3.2 cm. wide, acute or obtuse at the apex, acute or acuminate at the base, rather irregularly serrate along the margins except at the very base (the teeth acute or subacute on small leaves, often blunt and even biserrate on large leaves), rather densely pubescent on both surfaces with hairs that are irregular in length and are more or less antrorsely appressed above, more or less sparsely resinous-granular beneath; midrib very slender, flat above, subprominulous beneath; secondaries very slender, 4 or 5 per

side, mostly obscure or indiscernible above, subprominulous or obscure beneath, forking near the margins with a branch going to the apex of each marginal tooth; veinlet reticulation obscure or indiscernible; inflorescence terminal, subspicate-racemiform, 7--25 cm. long, rather loosely many-flowered when elongate, somewhat more dense when abbreviated, very dense before anthesis, rather densely spreading-pubescent throughout with mostly gland-tipped hairs and also resinous-granular; peduncles very slender, 1--2.5 cm. long, tetragonal; pedicels filiform, 1--3 mm. long; bractlets linear, about 3 mm. long; calyx tubular, somewhat gibbous toward the base, about 3 mm. long and 1.8 mm. wide, 5-costate, densely spreading-pubescent with gland-tipped hairs, slightly zygomorphic, its rim 5-toothed, the teeth narrow callous-thickened apiculations, 3 about 0.2 mm. long and the other 2 about 0.5 mm. long; corolla infundibular, white or pale-violet, tinged violet in the throat, glabrous, its tube infundibular, about 4 mm. long, ampliate at the apex, its limb 2-lipped, venose, the larger lip 3-lobed, the other 2-lobed, the largest lobes suborbicular, about 2 mm. long and wide, grose-rounded on the margins, the 2 adjacent lobes about 1.5 mm. long and wide and the remaining 2 about 1 mm. long and wide; stamens 4, didynamous, one pair inserted about 1 mm. and the other pair about 1.5 mm. above the base of the corolla-tube, included; filaments filiform, about 1 mm. long, glabrous, genuflexuous or sigmoid at the apex; anthers oblong, about 0.7 mm. long and 0.4 mm. wide; pistil included; style capillary, about 0.5 mm. long, glabrous; stigma peltate, vertical, about 0.5 mm. long; ovary subglobose, about 0.7 mm. long and wide, glabrous; fruit splitting very readily into 2 similar hemispheric cocci, each about 2 mm. long and 1 mm. wide, nitid, brownish, flat and smooth on the commissural surface, very convex and reticulate-ridged on the outer face.

The type of this distinct species was collected by Henri Lambert (no. 14292) -- in whose honor it is named -- on a limestone plateau in the forest of Analafanja, north of Fiherenana, at an altitude of 950--1000 m., Madagascar, in March 1934, and is deposited in the herbarium of the *Muséum National d'Histoire Naturelle* at Paris.

COELOCARPUM SWINGLEI Moldenke, sp. nov.

Suffrutex; caulibus ramisque brevibus rigidis gracilibus pallide griseis vel albidis dense adpresso-strigosis; foliis oppositis numerosis uniformibus sessilibus vel subsessilibus; laminis firme chartaceis elliptico-oblongatis rotundis vel subacutis, ad basin attenuato-cuneatis, obscure cremulatis vel subintegris, supra minute adpresso-strigillosis, subtus densiuscule strigosis; inflorescentiis rigide rectis dense multifloris.

subshrub, apparently much branched; stems and branches short, stiff, slender, light-gray or whitish, densely strigose with closely appressed antrorse white hairs, rather obtusely tetragonal, often canaliculate-sulcate on the younger parts; nodes not plainly annulate; principal internodes 0.7--3.8 cm. long; leaves decussate-opposite, numerous, quite uniform in size and

shape, sessile or subsessile; petioles obsolete or to 1 mm. long and densely strigose, margined; blades rather firmly thick-chartaceous, uniformly bright-green on both surfaces or lighter beneath, elliptic-oblancoelate, 1--2 cm. long, 3--6.5 mm. wide, rounded or subacute at the apex, attenuate-cuneate at the base, very shallowly and obscurely crenulate toward the apex or subentire, minutely appressed-strigillose with very short antrorse hairs above, much more densely and conspicuously strigose beneath or sometimes densely whitish-strigose on both surfaces; midrib slender, impressed above, prominent beneath; secondaries very slender, 3--5 per side, close together, ascending, hardly arcuate, impressed above, prominulous beneath; veinlet reticulation obscure on both surfaces; inflorescence terminal, stiffly erect, spicate, very densely many-flowered before, during, and after anthesis, 3--11 cm. long, about 9 mm. wide during anthesis (including the corollas), densely white-strigose with appressed whitish hairs throughout; peduncles slender, 1--1.8 mm. long; pedicels absent; bractlets linear-lanceolate, 3--3.5 mm. long, attenuate-acuminate at the apex, densely strigose; calyx obconic, about 3.5 mm. long, slightly zygomorphic, about 2 mm. wide at the apex, 5-costate, very densely strigose with whitish antrorse hairs, its rim 5-toothed, the teeth narrowly callous-apiculate and about 0.5 mm. long; corolla infundibular, glabrous, its tube infundibular, about 4 mm. long, straight, amplicate above, its limb erect, 5-lobed, the lobes subequal, rotund-lingulate, about 1.5 mm. long, 1--1.5 mm. wide, erose-margined, venose; stamens 4, didynamous, included, inserted about 2 and 2.5 mm. above the base of the corolla-tube; filaments filiform, about 0.5 mm. long, glabrous; anthers oblong, about 0.9 mm. long and 0.6 mm. wide; pistil included; style capillary, about 1 mm. long, glabrous; stigma peltate, vertical, about 0.5 mm. long; ovary oblong-subglobose, about 0.7 mm. long, 0.6--0.7 mm. wide, glabrous; fruit apparently not separating into 2 distinct cocci, subglobose, hard and dry, about 2 mm. long and wide, brumescens or nigrescent, not nitid, glabrous, marked with very few obscure ridges.

The type of this very distinct species was collected by Henri Humbert and C. F. Swingle (no. 5413) on sand near Itampolo at Lake Manamoetsa on the delta of the Linta, southwest coast of Madagascar, at an altitude of 1--10 m., between August 17 and 24, 1928, and is deposited in the United States National Herbarium at Washington.

LANTANA MILNE-REDHEADI Moldenke, sp. nov.

Herba lignosa; ramis debilibus obtuse tetragonis densiuscule breviter pubescentibus vel adpresso-puberulis; foliis oppositis; petiolis brevibus vel subobsoletis adpresso-pubescentibus glanduloso-punctatis resinosis; laminis firme chartaceis ovatis acutis, ad basin attenuato-acuminatis, regulariter serratis, supra scabris, subtus puberulis et resinoso-granulosis; inflorescentiis axillaribus spicatis cylindricis dense multifloris; bracteolis late ovatis mucronatis vel breviter acuminatis.

Woody herb; branches sprawling, obtusely tetragonal, rather

densely short-pubescent or puberulent with arcuate-appressed antrorse fulvous hair; nodes indistinctly annulate; principal internodes 2.5--6.5 cm. long; leaves decussate-opposite; petioles to 5 mm. long or subobsolete, appressed-pubescent with short fulvous hairs and glandular-punctate with resinous globules; blades rather firmly chartaceous, deep-green above, somewhat lighter beneath, ovate, 3--5.5 cm. long, 1.3--2.7 mm. wide, acute at the apex, attenuate-acuminate into the winged petiole at the base, regularly serrate with rounded teeth from the apex to near the base, scabrous above, rather abundantly puberulent and resinous-granular beneath; midrib slender, impressed above, prominent beneath; secondaries slender, about 6 per side, ascending, not much arcuate (if at all), impressed above, prominent beneath, ending in the sinuses between the teeth; veinlet reticulation abundant, impressed or subimpressed above, prominent beneath; inflorescence axillary, 2--4 per node, shorter than the subtending leaves, ascending; peduncles slender, firm, 0.5--4 cm. long, rather densely short-pubescent with antrorse appressed fulvous hairs and densely resinous-granular; spikes cylindrical, elongated to 3 cm. in fruit and to 1.4 mm. wide, densely many-flowered; bractlets closely imbricate, green but tinged dull-purple, broadly ovate, to 10 mm. long and 9 mm. wide, mucronate or short-acuminate, sparsely appressed-puberulent or strigillose and resinous-punctate on both surfaces, venose, foliaceous; corollas bright-mauve, 4--5 long, densely puberulent on the outer surface, its limb 2 mm. wide; fruit drupaceous, subglobose, about 3 mm. in diameter, sparsely puberulent-pilosulous, ridged and sulcate in drying.

The type of this species was collected by my good friend, E. Milne-Redhead (no. 3542) -- in whose honor it is named -- just west of Matonchi Farm, in *Brachystegia* woodland, Mwinilunga district, Northern Rhodesia, on December 7, 1938, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

LANTANA PITTIERI Moldenke, nom. nov.

Cordia microcephala Willd. in Roem. & Schult., Syst. Veg. 4: 801. 1819 (not *Lantana microcephala* A. Rich., Fl. Cub. Phanerog. 2: 141. 1850).

LANTANA RHODESIENSIS Moldenke, sp. nov.

Herba crassa vel suffrutex; caulibus angulatis multisulcatis densiuscule pubescentibus, pilis antrorse-divergentibus sordidis; foliis verticillatis; petiolis crassiusculis dense pubescentibus saepe plusminusve resinoso-granulosis; laminis submembranaceis ovatis apicem versus gradatim attenuatis, ad basin abrupte acutis vel rotundatis, regulariter crasso-serratis, supra sparsiuscule scabrido-pilosis, subtus dense puberulis vel breviter pubescentibus; inflorescentiis axillaribus capitatis; pedunculis valde abbreviatis dense antrorso-pubescentibus.

Coarse herb or shrub; stems rather distinctly angled and many-sulcate, rather densely pubescent with antrorse-spreading sordid hairs; nodes not plainly annulate; principal internodes 4.5--7.5 cm. long; leaves whorled in 3's or 4's; petioles

stoutish, 3--7 mm. long, densely pubescent with straight antrorse white hairs like the stems and often more or less resinous-granular; blades submembranous, dark-green above, lighter beneath, ovate, 6--8 cm. long, 3--4 cm. wide, gradually attenuate to the acute apex, abruptly acute or rounded at base, regularly and coarsely serrate with rounded or abruptly acute teeth from the apex almost to the very base, rather sparsely scabridous-pilose above, densely puberulent or short-pubescent beneath; midrib slender, prominulous beneath; secondary veins slender, plane above, prominulous beneath, 5 or 6 per side, arcuate-ascending, not entering the teeth, their upper branches ending in the sinuses; veinlet reticulation rather abundant, rather indistinct above; inflorescence axillary, capitate, much shorter than the subtending leaves; peduncles much abbreviated, 5--12 mm. long (in fruit), densely pubescent like the stems with antrorse whitish hairs; heads subglobose, to 2 cm. long and wide (in fruit); bractlets foliaceous, broadly ovate, 1.4--2 cm. long, 5--7 mm. wide, long-attenuate or acuminate at the apex, truncate or rounded at base, venose, densely appressed-puberulent or strigillose; flowers not seen; fruit drupaceous, globose, about 2 mm. in diameter.

The type of this very distinct and unique species was collected by Mrs. Macaulay (no. 735) near Mumbwa, Northern Rhodesia, in 1911, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

LANTANA SCABIOSAEFLORA f. *ALBIDA* Moldenke, f. nov.

Hæc forma a forma typica speciei corollis albidis recedit.

This form differs from the typical form of the species in having its corollas cream-colored to nearly white.

The type was collected by Ira L. Wiggins (no. 10899) near the junction of the Rio Luis and Rio Ambocas, 10 km. due south of Portovelo, at an altitude of 2200--2500 feet, El Oro, Ecuador, on October 6, 1944, and is deposited in the Britton Herbarium at the New York Botanical Garden.

LANTANA SWYNNERTONII Moldenke, sp. nov.

Frutex; ramis gracilibus acute tetragonis plusminusve puberulis inermibus, pilis sæpe antrorse uncinatis; foliis oppositis vel ternatis; petiolis obsoletis vel brevissimis puberulis et sæpe longe pilosis; laminis chartaceis ellipticis acutis vel rotundatis, at basin acutis, regulariter serratis, supra minutissime puberulis, subtus dense puberulis.

A shrub; branches slender, acutely tetragonal, more or less puberulent, the hairs often antrorsely uncinately, unarmed; nodes rather indistinctly annulate; principal internodes abbreviated, 0.8--4.3 cm. long; leaves opposite or ternate; petioles obsolete or to 2 mm. long, puberulent and often also long-pilose with white antrorse hairs; blades chartaceous, elliptic, 2--4.5 cm. long, 1--2 cm. wide, acute or rounded at apex, acute at base, regularly serrate with rounded teeth from the apex almost to the base, microscopically puberulent above, densely puberulent beneath; midrib very slender, subimpressed above, prominu-

lous beneath; secondaries very slender, plane or very slightly subimpressed above, prominulous beneath, 5 per side, ascending, not entering the teeth; inflorescence axillary, 2 or 3 per node, surpassing the subtending leaves; peduncles slender, 3--4.5 cm. long, minutely puberulent; heads small, densely flowered, hemispheric, 1--1.3 cm. wide; bractlets broadly elliptic-ovate, about 3 mm. long and wide, abruptly acute, densely puberulent on the back; corollas about 6 mm. long, mauve, densely puberulent on the outside, the limb about 3 mm. wide; fruit purple.

The type of this curious species was collected by C. F. M. Swynnerton (no. 259) near Chirinda, Gazaland, Southern Rhodesia, at an altitude of 3500 feet, in 1906, and is deposited in the herbarium of the Royal Botanic Gardens at Kew. The species obviously belongs in the L. Camara L. group, but differs conspicuously in its broad bractlets.

LIPPIA AFRICANA var. **SESSILIS** Moldenke, var. nov.

Haec varietas a forma typica speciei recedit foliis firme rigidis sessilibus verticillatis uniforme angusto-ellipticis supra perscabrae bullatae, inflorescentiis verticillatis foliam aequantibus.

This variety differs from the typical form of the species in having its leaves firm and rigid, sessile, whorled in 4's, and uniformly narrow-elliptic, 2.5--4.5 cm. long and 8--13 mm. wide, very scabrous and bullate above, and the inflorescences whorled in 4's, equaling or slightly exceeding the leaves.

The type was collected by H. V. Lely (no. 320) at Naraguta, Northern Nigeria, on June 23, 1921, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

LIPPIA GRANDIFOLIA var. **LONGIPEDUNCULATA** Moldenke, var. nov.

Haec varietas a forma typica speciei pedunculis regulariter usque ad 4 cm. longis recedit.

This variety differs from the typical form of the species in having its peduncles regularly up to 4 cm. long.

The type was collected by R. Dummer (no. 54) in elephant grassland, at 4000 feet elevation, at Kepayo, Uganda, between July and September, 1914, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

LIPPIA MULTIFLORA var. **PUBESCENS** Moldenke, var. nov.

Haec varietas a forma typica speciei recedit caulibus ramisque petiolisque pedunculisque dense strigoso-pubescentibus et laminis foliorum supra plusminusve scabro-pilosis, subtus dense breviterque pubescentibus.

This variety differs from the typical form of the species in having its stems and branches, as well as the petioles and peduncles, densely strigose-pubescent, and its leaf-blades more or less scabrous-pilose above and densely short-pubescent beneath.

The type was collected by H. V. Lely (no. 241) at Naraguta, altitude 4000 feet, Northern Nigeria, on May 30, 1921, and is deposited in the herbarium of the Royal Botanic Gardens at Kew. Its pubescence renders this variety very distinct.

LIPPIA NIGERIENSIS Moldenke, sp. nov.

Herba annua; caulibus ut videtur simplicibus obtuse tetragonis sulcatis dense breviterque pubescentibus, pilis irregulariter contortis divergentibus albidis; foliis ternatis adscendentibus; petiolis dense albido-pubescentibus; laminis firme chartaceis oblongo-ellipticis acutis vel subacutis regulariter serratis supra scabris et strigilloso-pilosis, subtus dense canescento-tomentellis; inflorescentiis terminalibus corymbiformibus dense canescento-pubescentibus, pilis antrorsis.

Annual herb; stems apparently simple, obtusely tetragonal, the sides sulcate, densely short-pubescent with irregularly twisted rather spreading whitish hairs; nodes rather indistinctly annulate; principal internodes 5--11 cm. long; leaves ternate, ascending; petioles 1 cm. long or less, densely white-pubescent with more or less antrorse hairs; blades firmly chartaceous, oblong-elliptic, 4.5--9.5 cm. long, 1--2 cm. wide, acute or subacute at apex, rather regularly serrate with bluntish teeth except at the base, scabrous and strigillose-pilose above, densely canescent-tomentellous beneath; midrib slender, impressed above, prominent beneath; secondaries very slender, short, 10--12 per side, arcuate-ascending, arcuately joined near the margin, not extending into the teeth, impressed above, prominulous beneath; veinlet reticulation abundant, subimpressed above, prominulous but usually hidden by the tomentum beneath; inflorescence axillary and terminal, the axillary ones usually limited to a pair in the upper 1 or 2 groups of leaf-axils, the terminal ones aggregated into a more or less flattened corymb of which most of the rays are compound (branched to form a small umbel of heads at the apex); primary and secondary peduncles densely canescent-pubescent with more or less antrorse hairs; bracts limited to 1 or 2 groups of 2 each beneath and in the terminal corymb; spikes capitate or to about 1 cm. long, densely many-flowered; bractlets ovate, about 4 mm. long and 2 mm. wide, acuminate or subacuminate, very densely villous with canescent or slightly yellowish hairs; corolla-tube about 3 mm. long, densely tomentellous on the outside except at the very base, the larger lip an additional 1 mm. long, tomentellous on the outer surface, glabrate within.

The type of this distinct species was collected by W. D. MacGregor (no. 429) on the Banchi Plateau, Northern Nigeria, on December 28, 1928, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

LIPPIA NIGERIENSIS var. *BREVIPELUNCULATA* Moldenke, var. nov.

Haec varietas a forma typica speciei recedit foliis 4--6-verticillatis brevioribus, supra bullatis, inflorescentiis simplicibus brevioribus.

This variety differs from the typical form of the species in having its leaves regularly in whorls of 4--6, only 3--4.5 cm. long and 4--11 mm. wide, and bullate above, and the inflorescences unbranched and only 1.5--3 cm. long in all.

The type was collected by H. V. Lely (no. P.40) in groups after fires at Banchi, Northern Nigeria, in January 1929, and

is deposited in the herbarium of the Royal Botanic Gardens at Kew.

PAEPALANTHUS FERREYRAE Moldenke, sp. nov.

Herba parva caulescens; caulibus gracilibus brachiatis foliosis, ad apicem longe pilosis; foliis linearibus arcuato-divergentibus, in statu juventute adpresse albedo-pilosis, ad basin longe pilosis, in statu senectute glabrescentibus, non fenestratis non venosis; pedunculis gracillimis solitariis densiuscule albedo-pilosis, pilis adpressis antrorsis; vaginis parce adpresso-pilosis; capitulis hemisphaericis griseis.

Small caulescent herb; stems slender, several-branched, to 5 cm. long, leafy, long-pilose at the apex; leaves all cauline, uniform, light-green, linear, 5--8 mm. long, about 1 mm. wide at the mid-point, arcuate-spreading, appressed white-pilose when young, long-pilose at the base, glabrescent in age, ampliate-sheathing at base, not fenestrate, the midrib indiscernible; peduncles very slender, usually solitary at the apex of each branch, about 3 cm. long, rather densely white-pilose with appressed antrorse hairs; sheath slender, appressed, 1 cm. or less in length, sparsely appressed-pilose with whitish hairs, its rim obliquely split, the blade ovate, erect, about 3 mm. long, acute at the apex; heads hemispheric, gray, about 5 mm. in diameter; involucrel bractlets elliptic, stramineous toward the base, dark-brown toward the apex, about 2.3 mm. long and 1 mm. wide, obtuse or acute at the apex, glabrous on both surfaces, shiny; receptacular bractlets oblong, about 1.5 mm. long and 0.5 mm. wide, triangular-acute at the apex, densely long-pilose with white hairs on the back; staminate florets: sepals 3, spatulate, connate at the base, the free part about 2.3 mm. long and 0.9 mm. wide, dark-brown, subtruncate and 3-denticulate at the apex, long-pilose on the back near the apex; petals 3, connate into a membranous infundibular tube about 2 mm. long; stamens 3; pistillate florets: sepals 3, separate, spatulate, about 2.3 mm. long and 1 mm. wide, whitish toward the base, dark-brown toward the apex, subtruncate and 3-denticulate at the apex, sparsely long-pilose at the very apex; petals 3, free, hyaline, spatulate, about 2.3 mm. long and 1 mm. wide, long-pilose at the apex, eglandular; pistil about 4 mm. long, glabrous, its appendages 3; ovary 3-celled, 3-ovulate.

The type of this species was collected by my good friend and colleague, Dr. Ramon Ferreyra (no. 809) -- in whose honor it is named -- in a stony habitat, altitude 2500--2600 m., above Cutervo, province of Cutervo, Cajamarca, Peru, on July 31, 1946, and is deposited in the Britton Herbarium at the New York Botanical Garden. The collector records the common name of "achupalla".

PREMIA MADAGASCARIENSIS Moldenke, sp. nov.

Frutex vel arbor parva; ramulis sarmentisque graciusculis griseis obtuse tetragonis lenticellatis minute pulverulento-puberulis vel glabrescentibus; foliis deciduis oppositis; petiolis cinereo-puberulis; laminis membranaceis vel raro charta-

ceis ovatis acuminatis, at basin subtruncatis vel rotundatis vel subcordatis integris vel irregulariter 6--10-dentatis, leviter puberulis vel glabratibus, subtus in axillis dense barbellatis; inflorescentiis cymosis axillaribus densissime multifloris.

Shrub or small tree, 3--4 m. tall; branchlets and twigs rather slender, gray, obtusely tetragonal, lenticellate, minutely pulverulent-puberulent on the younger parts, glabrescent in age; bark grayish-white on older wood; nodes annulate; principal internodes 0.7--2 cm. long; leaf-scars lunate or horseshoe-shaped, corky, often much elevated; leaves deciduous, decussate-opposite; petioles slender, 1--4 cm. long, flattened above, cinereous-puberulent with more or less antrorsely curvate hairs; blades membranous or rarely chartaceous in age, rather uniformly grayish-green on both surfaces or somewhat lighter beneath, ovate, 2.5--10.5 cm. long, 1.5--6.8 cm. wide, acuminate at the apex, varying from subtruncate to rounded or subcordate at the base, entire or coarsely and irregularly dentate with 3--5 obtuse or apiculate broadly triangular teeth on each side near the middle of the margins, very finely and obscurely puberulent or glabrate beneath, usually more densely puberulent along the larger venation and densely barbellate in the axils of the secondaries, glabrate (except for the midrib) above; midrib slender, flat and often puberulent above, prominulous beneath; secondaries very slender, 4--6 per side, ascending, rather irregular, not much arcuate, flat above, prominulous beneath, arcuately joined in many conspicuous loops near the margins beneath; veinlet reticulation very fine, abundant, obscure or conspicuous but not at all elevated above, quite conspicuous but not at all elevated beneath and forming there a very plain and intricate reticulum; inflorescence cymose, axillary; cymes 2 per node, decussate, usually 2 or 3 pairs densely clustered at the tips of the twigs, very densely many-flowered, to about 9.5 cm. long and 7 cm. wide, many times bifurcate; peduncles slender, 1--4 cm. long, very minutely puberulent or glabrescent, stramineous-brownish, antrorsely divaricate, often slightly upwardly curvate; inflorescence-branches 4-angled, similar to the peduncles in all respects, but the upper parts usually more plainly puberulent; bractlets and prophylla usually inconspicuous and linear, to 2 mm. long, puberulent; occasionally a pair of foliaceous bracts present, lanceolate, long-stipitate, to 3 cm. long and 5 mm. wide, sharply attenuate at the apex, subglabrescent; pedicels very short or obsolete; calyx campanulate-tubular, its tube straight, about 1.5 mm. long and 1 mm. wide, minutely and irregularly puberulent-pulverulent, the limb 2-lipped with one lip deeply 2-lobed with the firmly erect lanceolate lobes about 0.8 mm. long, the other lip shallowly 2-toothed with the firmly erect bluntish teeth about 0.5 mm. long; corolla white, hypocrateriform, glabrous on both surfaces, its tube cylindric, straight, about 2.5 mm. long, its limb 4-parted, the lobes oblong-lingulate, about 2 mm. long and 1 mm. wide, obtuse at the apex; stamens 4, inserted about 1.5 mm. above the base of the corolla-tube, subequal, exerted, spreading; filaments filiform, about 2.5 mm. long, glabrous; anthers elliptic, about

0.5 mm. long, 3-celled; pistil slightly exserted; style capillary, about 3.5 mm. long, glabrous; stignas shortly 2-lobed; ovary globose, about 0.5 mm. long and wide, glabrous, 4-celled; fruiting-calyx subpatelliform, about 3 mm. wide, minutely strigillose-puberulent, its rim irregularly and shallowly lobed; fruit subglobose, 4--5 mm. long and wide, fleshy, nigrescent in drying.

The type of this species was collected by Henri Perrier de la Bâthie (no. 10233) in the woods at Marovary, Madagascar, in October 1909, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris. The species appears to be related to P. acuminata R. Br. of Australia.

PRELINA PERRIERI Moldenke, sp. nov.

Frutex; ramulis gracilibus griseis obtuse tetragonis valde lenticellatis cinereo-tomentellis; sarmentis densissime brunneo-tomentellis; foliis oppositis deciduis; petiolis densissime brunneo- vel flavido-tomentellis; laminis submembranaceis ovatis acuminatis, ad basin rotundatis vel subcordatis, supra plusminusve pubescentibus, subtus dense brunneo-pubescentibus.

Shrub 3--4 m. tall; branchlets slender, grayish, obtusely tetragonal, conspicuously lenticellate, cinereous-tomentellous, less so in age; nodes indistinctly annulate; principal internodes 0.5--3 cm. long; twigs similar to the branchlets but very densely brownish-tomentellous; leaves deciduous, decussate-opposite; petioles slender, 1--3 cm. long, very densely brownish- or yellowish-tomentellous; blades thin-chartaceous or submembranous, dark-green and brunnescens above, much lighter beneath, ovate, 4--7.5 cm. long, 2.5--6.3 cm. wide, acuminate at the apex, rounded or subcordate at the base, more or less scattered-pubescent above with brownish hairs, more densely so along the midrib and secondaries, even more densely so beneath, entire; midrib slender, plane above, prominulous beneath, rapidly diminishing in size toward the apex; secondaries very slender, 4--6 per side, ascending, hardly at all arcuate but arcuately joined in many loops near the margins, plane (and often conspicuous because of the pubescence) above, subprominulous beneath; veinlet reticulation very numerous and fine, obscure or indiscernible above, plain but not at all elevated beneath; inflorescence cymose, terminal, about 3.5 cm. long, 3.5--4.5 cm. wide, densely many-flowered, composed of about 2 pairs of inconspicuously branched cymes; pedicels obsolete; calyx campanulate, densely short-pubescent, its tube about 2 mm. long and wide, its limb 2-lipped, one lip deeply 3-lobed with triangular elongate erose-margined acute lobes about 1.5 mm. long, the other lip shallowly 2-dentate with the teeth only about 1 mm. long; corolla hypocrateriform, glabrous on the outer surface, densely villous-tomentose in the throat within, its tube broadly cylindric, about 2 mm. long, its limb 4-parted, the lobes lingulate, about 2 mm. long and 1 mm. wide, rounded at the apex; stamens 4, didynamous, inserted about 1 and 1.5 mm. above the base of the corolla-tube, exserted; filaments filiform, about 3 mm. long, glabrous; anthers elliptic, about 0.7 mm. long,

2-celled; pistil slightly exserted; style capillary, about 4.5 mm. long, glabrous; stigma shortly 2-lobed; ovary globose, about 0.8 mm. long and wide, glabrous, 4-celled; fruiting-calyx and fruit not seen.

The type of this distinct species was collected by Henri Perrier de la Bâthie (no. 15075) -- in whose honor it is named -- at an altitude of 600 m. in the neighborhood of Antsakabary, Madagascar, in September 1922, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris. The plant has much the superficial aspect of a Viburnum.

PRIVA LEYERI var. **MADAGASCARIENSIS** Moldenke, var. nov.

Hæc varietas a forma typica speciei seminibus brevissime spinosis recedit.

This variety differs from the typical form of the species in having decided, although few and very short, spines on its cocci.

The type of the variety was collected by Henri Humbert (no. 6732) on gneiss rocks in the upper basin of the Mandrare, on the promontory of Vavara to the valley of the Manambolo, at an altitude of 700--1200 m., in southeast Madagascar between November 20 and 22, 1928, and is deposited in the herbarium of the Muséum National d'Histoire Naturelle at Paris.

REYNOUITRIA JAPONICA var. **RUBRA** Moldenke, var. nov.

Hæc varietas a forma typica speciei floribus rubris recedit.

This variety differs from the typical form of the species in having deep-red flowers.

The type was collected in outdoor cultivation at 6 Fairfield Street, White Plains, Westchester County, New York, by Mrs. F. R. White on October 3, 1949, and is deposited in the Britton Herbarium at the New York Botanical Garden.

STACHYTARPHETA MACEDOII Moldenke, sp. nov.

Herba parva annua; caulibus gracilibus rectis simplicibus vel paucè brachiatis acute tetragonis glabris; foliis oppositis parvis sessilibus; laminis chartaceis adscendentibus lanceolatis obtusis vel subacutis integris vel obscure denticulatis, ad basin truncatis vel subcordatis, utrinque glabris subrevolutis.

Small herb, apparently annual, to 40 cm. tall; stems slender, simple or with 2 branches above, erect, acutely tetragonal, glabrous, green or purplish, the angles slightly margined; branches none or to 2, erect, similar to the stems in all respects; nodes annulate, often with a band of spreading whitish hairs; principal internodes 0.8--3.8 cm. long; leaves decussate-opposite, sessile, small; blades chartaceous, rather uniformly green on both surfaces, rather firmly ascending, lanceolate, 1.4--3.4 cm. long, 2--5 mm. wide, obtuse or subacute at the apex, entire or very obscurely and sparsely denticulate, truncate or subcordate at the base, glabrous on both surfaces or with a very few widely scattered pilose hairs, often slightly subrevolute along the margins beneath; midrib very slender, plane or obscure above, subprominulous beneath; secondaries ob-

scure; veinlet reticulation indiscernible on both surfaces; inflorescence terminal, spicate, 11--20 cm. long, densely many-flowered, the flowers and fruits imbricate and appressed; peduncles slender, 1--1.5 cm. long, tetragonal, green, glabrous; rachis green, glabrous or practically so; bractlets lanceolate-ovate, about 3 mm. long, acuminate at the apex, glabrous or subglabrous; calyx cylindrical, about 4 mm. long, its teeth about 1 mm. long, glabrate; corolla lilac or bluish, its tube about 5 mm. long, glabrous on the outside, its limb about 4 mm. wide.

The type of this unique species was collected by Amado Macedo (no. 1647) -- in whose honor it is named -- in the "resfriado" (very dry untilled periodically flooded ground) at São Terezinha, município Ituiutaba, Minas Geraes, Brazil, on February 11, 1949, and is deposited in the Britton Herbarium at the New York Botanical Garden.

SYNGONANTHUS DENSUS var. **PUMILUS** Moldenke, var. nov.

Haec varietas a forma typica speciei foliis usque ad 1 cm. et pedunculis usque ad 5.5 cm. longis recedit.

This variety differs from the typical form of the species in having its leaves only to 1 cm. long and its peduncles to 5.5 cm. long.

The type was collected by Philipp von Luetzelburg (no. 20568 in part) at Passarão on the Rio Araricuera, Amazonas, Brazil, and is no. 47668 in the herbarium of the Museu Nacional at Rio de Janeiro.

SYNGONANTHUS KUHLMANNII Moldenke, sp. nov.

Herba acaulescens; foliis dense rosulatis appressed vel reflexis anguste linearibus supra glabris, subtus dense pilosopubescentibus, ad basin lanatis, ad apicem attenuato-subulatis, brunnescentibus non fenestratis; vaginis arcte adpressis irregulariter longaeque pilosis; pedunculis numerosis 3-costatis glabris nitidis vel basin versus paucae longaeque pilosis.

Acaulescent herb to 26 cm. tall; leaves densely rosulate, appressed to the ground or reflexed, narrowly linear, 2--3.5 cm. long, about 1 mm. wide at the mid-point, glabrous above, densely pilose-pubescent beneath, lanate at the hidden base, attenuate-subulate at the apex, brunnescent in drying, thin-textured but not fenestrate, the midrib prominent beneath; sheaths closely appressed, about 2.5 cm. long, irregularly long-pilose, obliquely split at the apex, the blade erect, about 5 mm. long, acuminate, its more or less subulate tip often divergent-reflexed; peduncles numerous, 15 or more per plant, erect, firm, stramineous, 20--25 cm. long, 3-costate, glabrous and shiny or with a few scattered long-pilose hairs toward the base; heads white, hemispheric, 6--7 mm. wide; involucrel bractlets stramineous, spatulate, firm, about 2 mm. long and 1 mm. wide, rounded at the apex, glabrous, shiny; receptacle densely white-villous; receptacular bractlets subhyaline, oblanceolate-spatulate, about 2 mm. long and 0.7 mm. wide, obtuse at the apex, glabrous; staminate florets: sepals 3, connate at the base only or for half their length into a filiform tube,

the free apical part hyaline, elliptic, about 1.7 mm. long and 0.5 mm. wide, gradually attenuate to the acute apex, glabrous; petals 3, connate into a subhyaline tube about 1 mm. long; stamens 3, included; anthers yellow; pistillate florets: sepals 3, free and separate, hyaline, subfalcate-lanceolate, about 2 mm. long and 0.4 mm. wide, attenuate-acute, glabrous; petals 3, connate at the middle, hyaline, about 1 mm. long, attenuate to the apex, glabrous; pistil about 0.8 mm. long, glabrous; ovary 3-celled.

The type of this species was collected by my good friend and respected colleague, Dr. João Geraldo Kuhlmann (no. 1635) -- in whose honor it is named -- in sandy varzea land between Zocahariuna and Utiauina (Buriti and Rio de Calôr), Mattogrosso, Brazil, in May 1918, and is deposited in the herbarium of the Museu Nacional at Rio de Janeiro.

VERBENA BERTERII f. *ALBIFLORA* Moldenke, f. nov.

Haec forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having white corollas.

The type was collected by Ellsworth Paine Killip and Edmundo Pisano (no. 39711) on an open hillside, at an altitude of about 600 m., between Curacavi and Casablanca, on the western slope of the Cuesta de Zapata, Valparaiso, Chile, on November 3, 1948, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA BRASILIENSIS var. *SUBGLABRATA* Moldenke, var. nov.

Haec varietas a forma typica speciei recedit caulibus ramisque glabris vel subglabratissimis, inflorescentiis unifloris bis trifurcatis, pedunculis primariis glabris vel subglabratissimis, pedunculis secundariis rhachidisque puberulis, bracteolis non ciliatis minutissime obscureque puberulis vel glabrescentibus, calicibus minute puberulis non strigosis.

This variety differs from the typical form of the species in having its branches and stems glabrous or subglabrate and nitid, its inflorescences uniformly twice trifurcate, the primary peduncles glabrous or subglabrate, the secondary peduncles and rachis puberulent, the bractlets non-ciliate, very minutely and obscurely puberulous or glabrescent, the calyxes very minutely puberulent and not at all strigose.

The type was collected by Ernesto Barros V. (no. 8050) at San Fernando, Colchagua, Chile, on February 7, 1930, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA CLAVATA f. *ALBIFLORA* Moldenke, f. nov.

Haec forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having white corollas.

The type was collected by Ramón Ferreyra (no. 2507) in a sandy habitat between 300 and 350 m. altitude between Nazca and Thala, Arequipa, Peru, on November 7, 1947, and is deposited in

the Britton Herbarium at the New York Botanical Garden.

VERBENA FERREYRAE Moldenke, sp. nov.

Herba; caulibus ramisque rectis vel adscendentibus obtuse tetragonis brunnescentibus parviscule albido-puberulis; foliis oppositis sessilibus tripartitis revolutis supra parce puberulento-pilosulis, subtus dense puberulis, segmentis pinnato-partitis vel -incisis; inflorescentiis terminalibus spicatis plerumque ternatis dense multifloris.

Herb; stems and branches erect or ascending, obtusely tetragonal, brunnescent in drying, rather sparsely puberulent with weak, irregular, whitish hairs, the former rather stoutish, the latter quite slender; nodes annulate; principal internodes 2--6.3 cm. long; leaves decussate-opposite, sessile, uniformly bright-green on both surfaces, the immature ones often brunnescent in drying, 3-parted almost to the base, 3--6 cm. long and wide, the 3 divisions again pinnately parted and incised, the lobes rather thick and acute, the segments irregular in diameter, usually increasing in diameter toward the leaf-base and there often to 8 mm. wide, revolute-margined, rather sparsely puberulent-pilosulous above, becoming glabrescent in age, more densely puberulent beneath, the single vein in each segment mostly subimpressed above and prominulous beneath, extending to the apex of each lobe; inflorescence terminal, that at the apex of the main stems usually ternate, spicate, densely many-flowered; peduncles slender, 1.5--4 cm. long, densely short-pubescent with reflexed whitish hairs; floriferous portion of the inflorescence usually conic before anthesis, capitate in anthesis, and elongate to 4 or more cm. after anthesis, very dense; bractlets oblong-linear, 6--8 mm. long, rather densely puberulent; calyx tubular, about 6 mm. long, 5-costate, rather densely short-pubescent, its rim 5-apiculate; corolla sky-blue, hypocrateriform, its tube about 8 mm. long, its limb about 9 mm. in diameter, densely pilose in the throat.

The type of this species was collected by my good friend and colleague, Dr. Ramón Ferreyra (no. 5491) -- in whose honor it is named -- in a stony habitat, 3200--3300 m. altitude, above Puquio, province of Lucanas, Ayacucho, Peru, on March 19, 1949, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA LUCANENSIS Moldenke, sp. nov.

Herba; caulibus ramisque rectis vel adscendentibus; ramis ramisque gracilibus obtusiuscule tetragonis dense breviterque albido-pubescentibus; foliis oppositis sessilibus; laminis chartaceis ovatis profunde tripartitis, segmentis profunde irregulariterque dissectis utrinque dense puberulis subrevolutis obtusis vel acutis; inflorescentiis breviter spicatis vel subcapitatis dense multifloris; bracteis lanceolatis puberulis.

Herb, with erect or ascending stems and branches; stems and branches slender, rather obtusely tetragonal, densely short-pubescent with whitish spreading hairs; nodes not annulate; principal internodes 0.5--4.2 cm. long; leaves decussate-oppo-

site, usually with a dense cluster of small ones on abbreviated twigs in their axils; petioles obsolete; blades chartaceous, rather uniformly bright-green on both surfaces, the immature ones more or less brunnescent in drying, ovate in outline, 1--4 cm. long and wide, deeply 3-parted, the divisions again deeply and rather irregularly parted or dissected, the lamina-segments 0.5--2.5 mm. wide, rather densely puberulent on both surfaces, the margins subrevolute, obtuse or acute at the apex, the single vein in each segment impressed above, prominulous beneath; inflorescence terminal and in the upper axils, short-spicate or subcapitate, to 3.5 cm. long, densely many-flowered; peduncles very slender, 4--15 mm. long, densely spreading-pubescent like the branches; bractlets lanceolate, about 3 mm. long and 1 mm. wide, gradually attenuate to the apex, densely puberulent; calyx tubular, 3--4 mm. long, densely puberulent, its rim 5-toothed, the teeth narrow attenuate; corolla purple, hypocrateriform, its tube 6--7 mm. long, very lightly puberulous on the outside toward the apex, its limb about 6 mm. in diameter; fruiting-calyx not inflated, easily splitting into 5 similar segments; cocci 4, oblong, about 2 mm. long, glabrous, shiny, the dorsal surface uniformly scrobiculate-ridged, the commissural surface white-papillose for the lower 2/3 only.

The type of this distinct species was collected by Ramón Ferreyra (no. 5493) in stony habitats, 1500--2000 m. altitude, between Nazca and Puquio, province of Lucanas, Ayacucho, Peru, on March 19, 1949, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA OCCULTA Moldenkø, sp. nov.

Herba; caulibus ramisque rectis vel adscendentibus brunnescentibus obtuse tetragonis adpresso-pilosulis vel breviter pubescentibus; foliis oppositis plusminusve amplexicaulibus sessilibus profunde tripartitis utrinque dense pubescentibus, segmentis plerumque pauce dentatis vel breviter lobatis.

Herb; stems and branches erect or ascending, brunnescent, obtusely tetragonal, appressed-pilosulous on the older parts, short-pubescent with spreading hairs on the younger parts; nodes annulate; principal internodes 0.5--3 cm. long; leaves decussate-opposite, sessile, more or less clasping-based; petioles obsolete; blades deeply 3-parted to about the middle, uniformly dark-green on both surfaces, brunnescent in drying, thin-chartaceous, very fragile in drying, densely pubescent on both surfaces with subappressed hairs of irregular length, the divisions often few-toothed or short-lobed, the lobes subacute, somewhat revolute-margined, the single vein in each segment flat or obscure above, prominulous beneath; inflorescence terminal, spicate, abbreviated, 1.5--4 cm. long, densely many-flowered; peduncles obsolete or to 2 cm. long, spreading-pubescent; bracts few, foliaceous, oblong, to 12 mm. long and 2 mm. wide; bractlets large and conspicuous, surpassing and mostly hiding the calyx, 8--10 mm. long, lanceolate, attenuate at the apex, rather densely appressed-pubescent; calyx about 5 mm. long, irregular, densely pubescent, its rim 5-lobed; corolla

purple, hypocrateriform, its tube 8--10 mm. long, its limb 4--5 mm. wide.

The type of this curious species was collected by Ramón Ferreyra (no. 1298) in a stony habitat, altitude 3200--3500 m., near Nevado Cajamarquilla, province Bolívar, La Libertad, Peru, on September 12, 1946, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA PULCHELLA f. *LATILOBATA* Moldenke, f. nov.

Haec forma a forma typica speciei recedit segmentis foliorum latissimis 3--7 mm. latis ad apicem obtusis.

This form differs from the typical form of the species in having its leaf-segments very broad, 3--7 mm. wide, and obtuse at the apex.

The type was collected by Mariano B. Berro (no. 4751) at Barra Santa Lucia, dept. Montevideo, Uruguay, on October 30, 1907, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA SULPHEREA var. *TALTALENSIS* Moldenke, var. nov.

Haec varietas a forma typica speciei suis elongatis 4.5--10 cm. longis recedit.

This variety differs from the typical form of the species in having its spikes elongated, 4.5--10 cm. long.

The type was collected by Ernesto Barros V. (no. 8032) at Taltal, Antofagasta, Chile, on September 26, 1940, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA TRIFIDA var. *DESERTICOLA* Moldenke, var. nov.

Haec varietas a forma typica speciei recedit planta diffusa valde brachiata ramis gracilioribus valde debilibus et segmentis foliorum uniforme oblongis vel linearibus 1--3 mm. latis obtusioribus.

This variety differs from the typical form of the species in being a more branched and diffuse plant, with more slender and much weaker branches, and with the divisions of the leaves uniformly oblong or linear, 1--3 mm. wide, and more obtuse at the apex.

The type of the variety was collected by Ernesto Barros V. (no. 8010) at Quebrada La Chimba, Antofagasta, Chile, on September 20, 1940, and is deposited in the Britton Herbarium at the New York Botanical Garden. The surprising number of novelties contained in recent collections sent to me from Chile and Peru is a good indication of the amount of work of exploratory nature that remains to be done by taxonomic botanists and collectors in these countries. The same may be said for Ecuador, parts of Brazil and Argentina, the mountainous sections of Venezuela and the Guianas, Madagascar, Nigeria, Rhodesia, and other parts of Africa. It is hoped that as more botanical collectors penetrate into these regions and send their material to specialists in the various plant groups, our knowledge of the flora of these lands may gradually become more complete.